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and recreation opportunities responsive to current and anticipated user demands.

- (d) In formulation and analysis of alternatives as specified in §219.12 (f) and (g), interactions among recreation opportunities and other multiple uses shall be examined. This examination shall consider the impacts of the proposed recreation activities on other uses and values and the impacts of other uses and activities associated with them on recreation opportunities, activities, and quality of experience.
- (e) Formulation and evaluation of alternatives under paragraphs (c) and (d) of this section shall be coordinated to the extent feasible with present and proposed recreation activities of local and State land use or outdoor recreation plans, particularly the State Comprehensive Outdoor Recreation Plan, and recreation opportunities already present and available on other public and private lands, with the aim of reducing duplication in meeting recreation demands.
- (f) The visual resource shall be inventoried and evaluated as an integrated part of evaluating alternatives in the forest planning process, addressing both the landscape's visual attractiveness and the public's visual expectation. Management prescriptions for definitive land areas of the forest shall include visual quality objectives.
- (g) Off-road vehicle use shall be planned and implemented to protect land and other resources, promote public safety, and minimize conflicts with other uses of the National Forest System lands. Forest planning shall evaluate the potential effects of vehicle use off roads and, on the basis of the requirements of 36 CFR part 295 of this chapter, classify areas and trails of National Forest System lands as to whether or not off-road vehicle use may be permitted.

§219.22 Mineral resource.

Mineral exploration and development in the planning area shall be considered in the management of renewable resources. The following shall be recognized to the extent practicable in forest planning:

(a) Active mines within the area of land covered by the forest plan;

- (b) Outstanding or reserved mineral rights;
- (c) The probable occurrence of various minerals, including locatable, leasable, and common variety;
- (d) The potential for future mineral development and potential need for withdrawal of areas from development;
- (e) Access requirements for mineral exploration and development; and
- (f) The probable effect of renewable resource prescriptions and management direction on mineral resources and activities, including exploration and development.

§219.23 Water and soil resource.

Forest planning shall provide for-

(a) General estimates of current water uses, both consumptive and nonconsumptive, including instream flow requirements within the area of land covered by the forest plan;

(b) Identification of significant existing impoundments, transmission facilities, wells, and other man-made developments on the area of land covered by the forest plan;

(c) Estimation of the probable occurrence of various levels of water volumes, including extreme events which would have a major impact on the planning area;

(d) Compliance with requirements of the Clean Water Act, the Safe Drinking Water Act, and all substantive and procedural requirements of Federal, State, and local governmental bodies with respect to the provision of public water systems and the disposal of waste

- (e) Evaluation of existing or potential watershed conditions that will influence soil productivity, water yield, water pollution, or hazardous events; and
- (f) Adoption of measures, as directed in applicable Executive orders, to minimize risk of flood loss, to restore and preserve floodplain values, and to protect wetlands.

§ 219.24 Cultural and historic resources.

Forest planning shall provide for the identification, protection, interpretation, and management of significant cultural resources on National Forest System lands. Planning of the resource

shall be governed by the requirements of Federal laws pertaining to historic preservation, and guided by paragraphs (a)(1) through (a)(3) of this section.

- (a) Forest planning shall—
- (1) Provide an overview of known data relevant to history, ethnography, and prehistory of the area under consideration, including known cultural resource sites:
- (2) Identify areas requiring more intensive inventory;
- (3) Provide for evaluation and identification of appropriate sites for the National Register of Historic Places;
- (4) Provide for establishing measures for the protection of significant cultural resources from vandalism and other human depredation, and natural destruction;
- (5) Identify the need for maintenance of historic sites on, or eligible for inclusion in, the National Register of Historic Places; and
- (6) Identify opportunities for interpretation of cultural resources for the education and enjoyment of the American public.
- (b) In the formulation and analysis of alternatives, interactions among cultural resources and other multiple uses shall be examined. This examination shall consider impacts of the management of cultural resources on other uses and activities and impacts of other uses and activities on cultural resource management.
- (c) Formulation and evaluation of alternatives shall be coordinated to the extent feasible with the State cultural resource plan and planning activities of the State Historic Preservation Office and State Archaeologist and with other State and Federal agencies.

§219.25 Research natural areas.

Forest planning shall provide for the establishment of Research Natural Areas (RNA's). Planning shall make provision for the identification of examples of important forest, shrubland, grassland, alpine, aquatic, and geologic types that have special or unique characteristics of scientific interest and importance and that are needed to complete the national network of RNA's. Biotic, aquatic, and geologic types needed for the network shall be identified using a list provided by the

Chief of the Forest Service. Authority to establish RNA's is delegated to the Chief at 7 CFR 2.60(a) and 36 CFR 251.23. Recommendations for establishment of areas shall be made to the Chief through the planning process.

§219.26 Diversity.

Forest planning shall provide for diversity of plant and animal communities and tree species consistent with the overall multiple-use objectives of the planning area. Such diversity shall be considered throughout the planning process. Inventories shall include quantitative data making possible the evaluation of diversity in terms of its prior and present condition. For each planning alternative, the interdisciplinary team shall consider how diversity will be affected by various mixes of resource outputs and uses, including proposed management practices. (Refer to §219.27(g).)

§219.27 Management requirements.

The minimum specific management requirements to be met in accomplishing goals and objectives for the National Forest System are set forth in this section. These requirements guide the development, analysis, approval, implementation, monitoring and evaluation of forest plans.

- (a) Resource protection. All management prescriptions shall—
- (1) Conserve soil and water resources and not allow significant or permanent impairment of the productivity of the land;
- (2) Consistent with the relative resource values involved, minimize serious or long-lasting hazards from flood, wind, wildfire, erosion, or other natural physical forces unless these are specifically excepted, as in wilderness;
- (3) Consistent with the relative resource values involved, prevent or reduce serious, long lasting hazards and damage from pest organisms, utilizing principles of integrated pest management. Under this approach all aspects of a pest-host system should be weighed to determine situation-specific prescriptions which may utilize a combination of techniques including, as appropriate, natural controls, harvesting, use of resistant species, maintenance of diversity, removal of damaged trees,